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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,145	03/31/2004	Angel Stoyanov	25385	8221

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EXAMINER

HAMLIN, DERRICK G

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/815,145

Applicant(s)

STOYANOV ET AL.

Examiner

Derrick G. Hamlin

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/04.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Claims 1-18 are currently pending.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Evaluations of level of ordinary skill in the art requires consideration of factors such as various prior art approaches employed, types of problems encountered in the art, rapidity with which innovations are made, sophistication of technology involved, educational background of those actively working in the field, commercial success, failure of others, and the inventor's educational level.

The "person having ordinary skill" in this art has the capability of understanding the scientific and engineering principles applicable to the claimed invention. The references of record in this case reasonably reflect this level of skill.

2. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norlander (US 6176973 A).

Norlander discloses a method for preparing an absorbent cellulose product having improved compressibility and decreased emissions during production of the product, which method comprises the steps of: defibering the cellulose fibers;

impregnating the cellulose fibers with a quantity, which is effective for crosslinking, of one or more water-soluble polymers which are produced in advance, which have an average molecular weight, Mw, of between 350 and 70,000 g/mol, and which possess free acid or aldehyde groups; wherein said water-soluble polymers have been produced by reacting a first di-, tri- or poly-functional compound with one or more di-, tri- or poly-functional alcohols and wherein said product has a density of at least 230 kg/m<sup>3</sup> following application of a pressure of at most 50 bar; drying the impregnated substance; defibering the impregnated substance at the latest after drying; and crosslinking the defibered cellulose fibers, in the dry state, by heating the impregnated, dried and defibered cellulose product. (col. 17, lines 19-41) The defibered cellulose products are crosslinked at a temperature of between 100 and 210 degrees C. (col. 17, lines 50-52) The objects of the invention can be achieved by crosslinking the cellulose fibers by means of reacting the cellulose with an effective quantity of one or more water-soluble polymers, which have been prepared in advance, which have an average molecular weight, Mw, of between 350 and 70,000 g/mol, preferably between 350 and 25,000 g/mol, and expediently between 450 and 10,000 g/mol, and which possess free acid or aldehyde groups. Good results have been achieved using water-soluble polymers which have been produced by means of reacting at least one first di-, tri- or poly-functional compound, which is not a polyol, such a citric acid or other di-, tri- or poly-functional carboxylic acids, with at least one polyol, so that the said polymers are obtained which possess free acid or aldehyde groups. (col. 2, lines 16-27 and 46) Cellulose fibers for crosslinking the defibered according to the invention can be selected from the bleached,

partially bleached, and unbleached, sulphate- or sulphite-delignified, softwood or hardwood fiber groups. (col. 5, lines 4-6)

The reference fails to teach that the bleaching step takes place last. The reference fails to teach the acids of claims 2 and 5, the polyols of claims 6-12 and the bleaching agent and amounts of claims 15-18.

The reference does teach that the cellulose material may be bleached first, therefore there would be a reasonable expectation of success to modify the prior art to arrive at the instantly claimed invention because the prior art suggest beaching and applicant has not shown why the bleaching step is required to be first. Cf. Interactive Gift Express, Inc. v. Compuserve Inc., 256 F.3d 1323, 1343 (Fed. Cir. 2001) (holding that a method claim not reciting an order of steps is not construed to require one, unless the "the method steps implicitly require that they be performed in the order written").

Additionally, the bleaches are notoriously well known in the art and the reference discloses the claimed invention except for how much bleach is used. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use an effective amount of bleaching agent to cause bleaching, since it has been held that discovering an optimum value of a result effective variable involves only routing skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CPA 1980).

Although the acids used are well know in the art, the reference does teach that various acids such as citric acid and alcohols in the molecular weight range of 92-276 g/mol may be used, therefore there would be a reasonable expectation of success to modify the prior art to arrive at the instantly claimed invention because the prior art suggest

acids with similar weights and structures to those that are instantly claimed. Although the polyols used are well known in the art, the reference does teach polyol in a specific weight range, therefore there would be a reasonable expectation of success to modify the prior art to arrive at the instantly claimed invention because the prior art suggests polyols with similar weights with a polyol structure.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to practice the instant method for forming a bleached crosslinked cellulose fiber as compounds with similar weights and structures would have a reasonable expectation of having similar properties.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick G. Hamlin whose telephone number is (571) 272-1317. The examiner can normally be reached on Monday-Fridays from ~8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta, can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

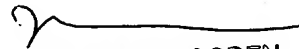
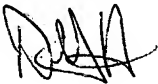
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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick G. Hamlin

11/29/04



NECHOLUS OGDEN  
PRIMARY EXAMINER